

# **Economic Impact of the TWA and American Airlines Merger in Missouri**

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**LOCAL-REGIONAL-STATE ECONOMIC MODELING SYSTEM**

LRS-0101-1



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## I. TWA Overview

Trans World Airlines (TWA) is the oldest continuous name in U.S. commercial aviation. TWA's hub is located at Lambert Airport in St. Louis. Of the top airlines, TWA was the only carrier to lose money in 1999, \$353 million, the worst financial performance since their 1995 reorganization. After struggling financially for many years, TWA has entered into negotiations with American Airlines regarding a potential buyout.

### Airline History

- Incorporated in 1925.
- 1992 TWA files petition for reorganization under Chapter 11 of the Federal Bankruptcy Code.
- 1993 Chapter 11 reorganization completed with employees owning 45% of the airline; creditors own the remaining 55%.
- 1995 TWA completes a second financial reorganization.

### TWA Profile

- Eighth largest U.S. air carrier.
- Employees approximately 20,500.
- Has a fleet of 189 aircraft.
- Serves 38 states, Mexico, Canada, and the Caribbean.
- Serves 83 cities with 351 daily departures.
- Serves 24 domestic and international cities from JFK with 41 daily departures.
- Carried approximately 26.4 million passengers in 2000.
- 2000 **revenue** \$2.7 billion, **profit** \$-115 million.

The proposed deal requires TWA to file for reorganization under Chapter 11 of the Federal Bankruptcy Code. American Airlines will then step in and provide financing. American Airlines would purchase all of TWA's assets and keep all 20,500 employees. The deal would also include an agreement between American Airlines and United Airlines to jointly operate the US Airways shuttle between Washington, New York, and Boston. American Airlines would acquire about 90% of U.S. Airways jets, dozens of gates at East Coast airports and several dozen landing and takeoff positions at LaGuardia and Reagan National airports. The deal also involves American Airlines buying a 49% stake in DC Air, a new carrier that is being crafted from United Airlines parent corporation.

The proposed merger may benefit St. Louis. Currently Lambert Airport has an annual economic impact of \$5 billion on the region. That amount is expected to increase to \$15 billion by the first quarter of 2005 once the Lambert expansion is complete. Lambert could become a gateway for the transfer of U.S. bound passengers, who could hub out of St. Louis to cities throughout the U.S. St. Louis could become a key hub for American Airlines, who seem to have maxed out gate space at its other Midwest hubs.

American Airlines expects its employees to accept TWA workers into their ranks without the usual turmoil experienced with traditional airline mergers. The key reason for this is that U.S. Airways will add to its workload by bringing in extra assets, but won't add a lot of additional workers. TWA's workers, on the other hand, will probably be relieved to be at a

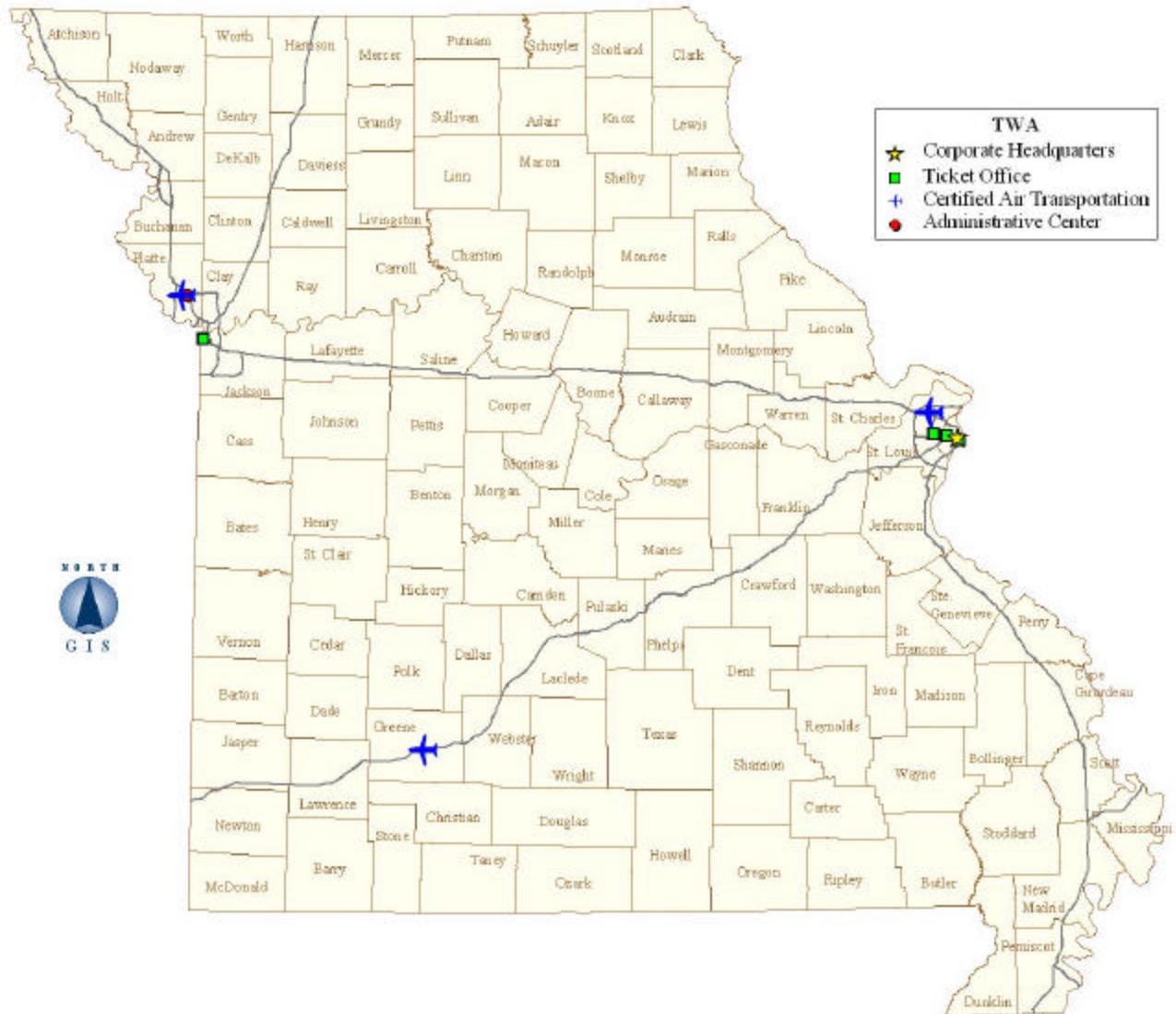
strong, stable, high-paying airline. Additionally, facing an industry wide shortage of mechanics, American decided that TWA's large maintenance facilities and experienced mechanics offer an opportunity to expand.

**Table 1**  
**Comparison of American Airlines and TWA**

	American Airlines	TWA
Headquarters	Fort Worth, TX	St. Louis, MO
Ranking	2	8
Employees	92,700	20,500
Fleet Aircraft	720	189
Revenue (nine months)	\$14.8 billion	\$2.7 billion
Profit (nine months)	\$766 million	\$-115 million
Passengers in 2000	86.2 million	NA
Major Hubs	Dallas Chicago Miami San Juan	St. Louis

TWA employs 12,430 people in Missouri. Almost all of TWA's facilities are located in Kansas City, St. Louis and Springfield. The air transportation division employs the majority of TWA workers - with 10,459 employed in St. Louis County, Kansas City and Springfield. The administrative and corporate division employs 1,947 people in Kansas City and St. Louis City. Lastly, TWA employs 24 people in the ticketing division, with offices in Kansas City, St. Louis County and St. Louis City. Refer to Map 1.

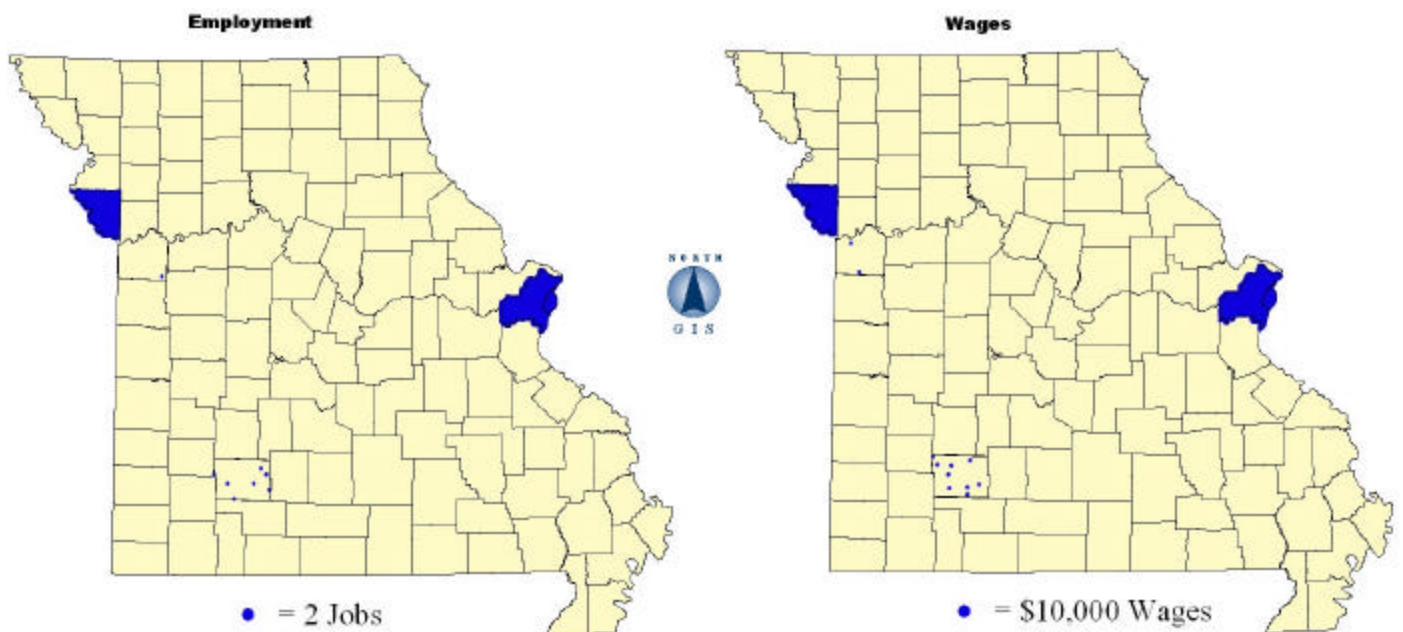
**Map 1**  
**Location of TWA Facilities in Missouri, 2000**



Source: ES-202, Missouri Department of Economic Development

According to the Missouri Department of Economic Development, TWA employs 12,430 people in Missouri. Employment is concentrated in St. Louis County (7,794), Platte County (3,646), St. Louis City (974), Greene County (14) and Jackson County (2). Taken together, TWA employment accounted for \$604.4 million in wages across Missouri in 2000. Refer to Map 2.

**Map 2**  
**TWA Employment and Wages in Missouri, 3<sup>rd</sup> Quarter 2000**



Source: ES-202, Missouri Department of Economic Development

## II. Methods

The economic impact of TWA in Missouri is analyzed using the Local-Regional-State (LRS) Economic Modeling System. The LRS model combines input-output and structural models to assess economic impacts. Employment and wage data is taken from ES-202 unemployment insurance reporting, collected by the Missouri Department of Economic Development.

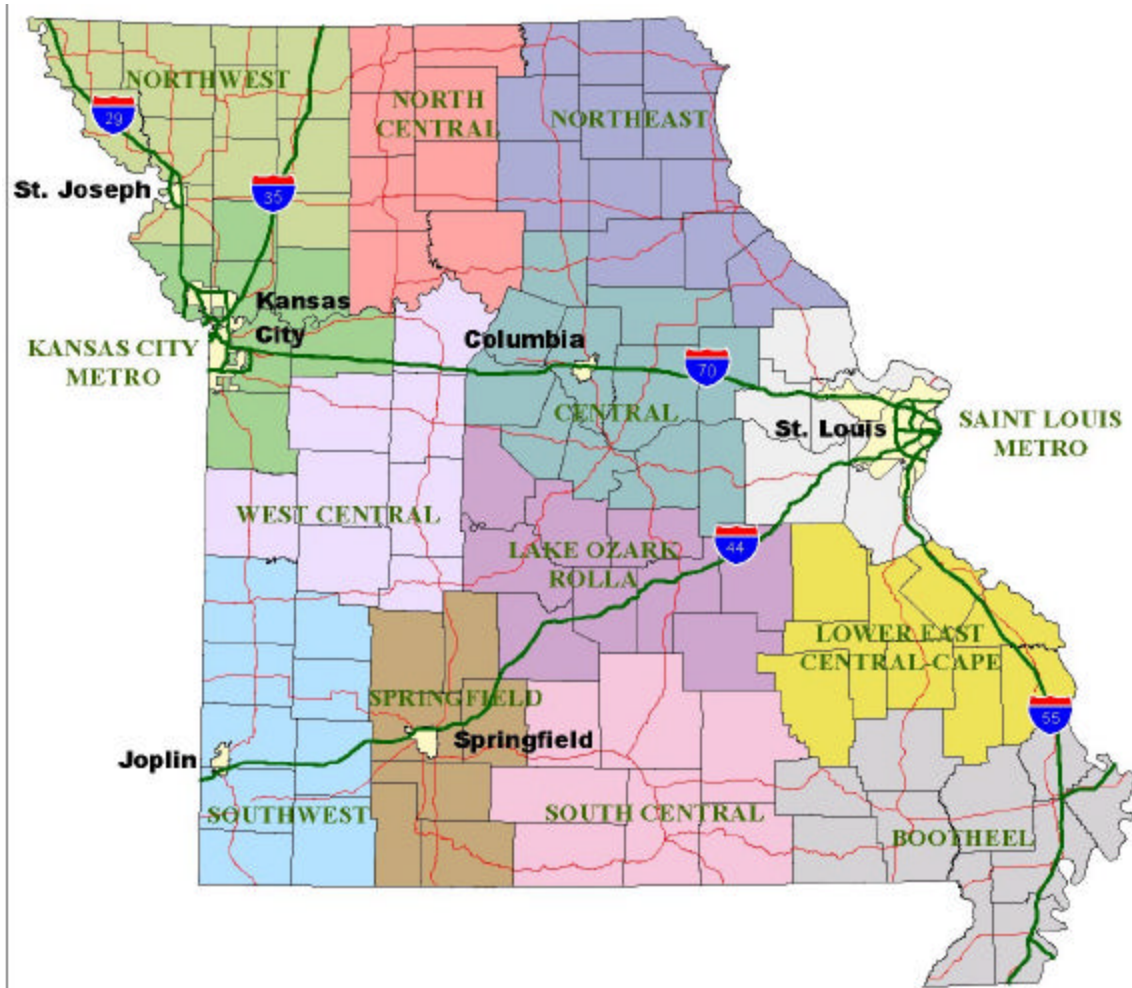
The IMPLAN **input-output model** is utilized to estimate the economic impacts at the county and state level. IMPLAN is a well-established input-output model that examines the economic relationships among businesses, and between businesses and consumers. The model estimates how changes in one or several economic sectors affects an entire economy. IMPLAN derives three types of economic effects that permit one to assess changes in the economy: *direct effects* are economic impacts directly attributable to change in a sector; *indirect effects* are business-to-business economic impacts; and *induced effects* are business-to-business and business-to-consumer economic impacts (spending of discretionary income by employees). While IMPLAN is a powerful tool in examining economic changes at the local level, it is limited in that it cannot predict long-term effects. It only offers a snapshot of an area's economy at one point in time, and is therefore relatively static.

The REMI Missouri Multi-Regional **structural model** is utilized to forecast economic impacts at the state and regional level. REMI is a comprehensive economic forecasting and policy analysis model. The model incorporates a complete economic history of the state and forecasts data specific to Missouri. The model also has thousands of policy variables that can be used to show the effects of a broad range of economic development policies. The dynamic structure of the model provides the capability to evaluate tax and other changes that affect costs as an aspect of these policies. The dynamic properties of the model also show medium and long-term effects, in addition to short-term effects, on the economy of Missouri. Further, REMI is able to forecast economic impacts for Missouri's 15 economic regions. Map 3 shows the economic regions within the state that comprise the REMI Missouri Multi-Regional Model.

For this analysis, three impact scenarios were conducted: (1) a **total loss scenario** where TWA would close all operations in Missouri; (2) an **overhaul base loss scenario** where TWA would close its overhaul and maintenance base in Kansas City; and (3) an **administrative and corporate loss scenario** where TWA would close its administrative centers and corporate headquarters in Kansas City and St. Louis City. It is unlikely that the total loss scenario would come to fruition, but it provides some grounding on the total impact TWA has on the state economy. The other two scenarios are more likely to occur, yet TWA and AA have made no mention of closing any operation in Missouri.



Map 3  
REMI Missouri Multi-Regional Model  
Economic Regions





### III. Total Loss Scenario

The following impact scenario assumes the closure of all TWA facilities in Missouri, resulting in the loss of all TWA jobs in the state. Impacts are ascertained by examining the difference between the baseline projection (no loss of jobs) and the scenario projection (loss of 12,430 jobs and \$604.4 million wages). The differential indicates the number of jobs above or below what would have been expected if no change in the economy had occurred. Job losses include both direct (jobs losses attributable to TWA closing) and indirect (job losses in ancillary sectors related to TWA operations) effects.

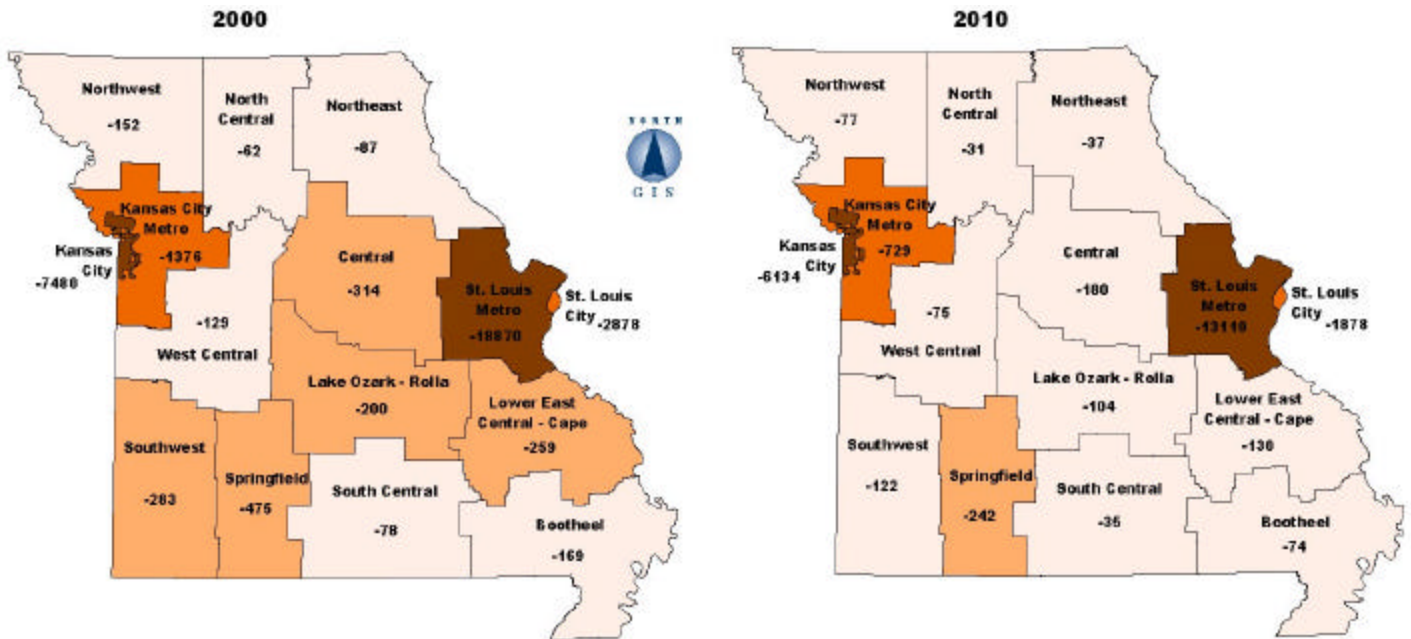
It appears that the loss of all 12,430 TWA jobs in Missouri would result in a total loss of 32,810 jobs and \$876 million wages in 2000. By 2010, the state economy regains 10,000 jobs, for a total loss of 22,960 jobs and \$744.5 million in wages. As expected, the St. Louis and Kansas City metro regions would experience the largest negative impacts. In 2000, the St. Louis Metro region would lose 18,870 jobs and \$541.1 million wages, with moderate recovery in 2010 with only 13,110 jobs and \$462.5 million wages lost. In 2000, the Kansas City region would lose 7,480 jobs and \$198.3 million in wages. By 2010 there is some recovery of jobs, but wages progressively fall - with 6,134 jobs and \$209.3 million in wages lost in 2010. This may indicate the increase of low-wage jobs in the Kansas City region.

Also, the St. Louis City and the Kansas City Metro regions experience sizeable job and wage losses in 2000, yet recovers somewhat by 2010. In general, the state's economy would slowly recover from the direct and indirect job losses attributable to TWA closure. Refer to Tables 2 and 3, and Map 4.

As expected, the Transportation, Communications and Public Utilities sector would be most adversely affected by the loss of all TWA employment in Missouri - losing 14,710 jobs and \$620.8 million wages in 2000, with only small recovery in 2010. The Services sector is also affected, losing 6,242 jobs and \$87.9 million wages in 2000. Also, in 2000 the Retail Trade sector loses 4,783 jobs and \$41.8 million in wages; and the Construction sector loses 2,577 jobs and \$44.0 million in wages. However, both of these sectors recovery moderately by 2010.

Interestingly, the Manufacturing sector experiences a loss of 1,072 jobs in 2000. However, by 2004 the manufacturing sector recovers all of these previously lost jobs; and by 2010 there is an additional 371 manufacturing jobs in the state's economy. Also, wages in durable manufacturing recover by 2006; and by 2010 there is an additional \$4.9 million in wages. Further, the Government sector experiences a small loss of employment in 2000, losing 325 jobs. However, by 2010 this expands to a loss of 1,427 jobs - indicating that this sector does not recover over time. Refer to Tables 4 and 5.

**Map 4**  
**Total Loss Scenario - Employment by Region, 2000-2010**



**Table 2**  
**Total Loss Scenario - Employment Change by Region, 2000-2010**  
Difference from baseline projection.

REGION	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Bootheel	-169	-154	-137	-120	-105	-93	-84	-79	-76	-75	-74
Central	-314	-304	-281	-256	-232	-212	-195	-188	-184	-180	-180
Kansas City	-7,480	-7,312	-7,069	-6,839	-6,633	-6,461	-6,325	-6,243	-6,188	-6,153	-6,134
Kansas City Metro	-1,376	-1,283	-1,160	-1,039	-933	-847	-782	-748	-731	-726	-729
LE Central/Cape	-259	-243	-218	-193	-171	-154	-141	-134	-131	-130	-130
Lake Ozark	-200	-188	-171	-153	-137	-124	-114	-109	-106	-105	-104
North Central	-62	-58	-52	-46	-41	-37	-34	-33	-32	-31	-31
North East	-87	-80	-71	-61	-53	-47	-42	-39	-38	-37	-37
North West	-152	-143	-129	-115	-102	-91	-83	-80	-78	-77	-77
South Central	-78	-72	-64	-56	-49	-44	-40	-37	-36	-35	-35
Springfield	-475	-439	-395	-351	-314	-283	-260	-249	-244	-242	-242
St. Louis	-2,878	-2,697	-2,488	-2,300	-2,145	-2,025	-1,940	-1,897	-1,876	-1,872	-1,878
St. Louis Metro	-18,870	-17,990	-16,950	-15,970	-15,130	-14,430	-13,900	-13,560	-13,330	-13,190	-13,110
South West	-283	-257	-227	-198	-173	-153	-137	-130	-125	-123	-122
West Central	-129	-124	-114	-103	-93	-85	-79	-76	-75	-74	-75
<b>MISSOURI</b>	<b>-32,810</b>	<b>-31,340</b>	<b>-29,520</b>	<b>-27,800</b>	<b>-26,310</b>	<b>-25,090</b>	<b>-24,150</b>	<b>-23,600</b>	<b>-23,250</b>	<b>-23,050</b>	<b>-22,960</b>

Source: ES-202, Missouri Department of Economic Development; and REMI.

**Table 3**  
**Total Loss Scenario - Wage Change by Region, 2000-2010**  
In millions of nominal dollars.  
Difference from baseline projection.

REGION	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Bootheel	-1.60	-1.51	-1.37	-1.20	-1.03	-0.88	-0.76	-0.67	-0.60	-0.55	-0.52
Central	-3.77	-3.66	-3.38	-3.01	-2.64	-2.31	-2.02	-1.83	-1.69	-1.56	-1.49
Kansas City	-198.30	-201.50	-204.40	-206.40	-207.90	-208.70	-209.10	-209.40	-209.60	-209.60	-209.30
Kansas City Metro	-23.52	-23.46	-22.14	-20.22	-18.16	-16.16	-14.30	-12.73	-11.41	-10.32	-9.42
LE Central/Cape	-3.29	-3.21	-2.92	-2.54	-2.15	-1.81	-1.52	-1.31	-1.15	-1.04	-0.97
Lake Ozark	-1.84	-1.78	-1.62	-1.42	-1.22	-1.04	-0.88	-0.77	-0.69	-0.63	-0.58
North Central	-0.48	-0.46	-0.42	-0.36	-0.31	-0.26	-0.22	-0.20	-0.18	-0.16	-0.15
North East	-0.82	-0.76	-0.69	-0.59	-0.50	-0.42	-0.35	-0.31	-0.27	-0.25	-0.23
North West	-1.60	-1.54	-1.41	-1.24	-1.06	-0.90	-0.76	-0.66	-0.57	-0.51	-0.47
South Central	-0.57	-0.53	-0.47	-0.41	-0.34	-0.29	-0.24	-0.21	-0.19	-0.17	-0.16
Springfield	-4.85	-4.64	-4.24	-3.76	-3.29	-2.88	-2.52	-2.28	-2.10	-1.98	-1.92
St. Louis	-81.48	-81.52	-78.67	-74.72	-70.61	-66.82	-63.47	-60.77	-58.63	-56.96	-55.71
St. Louis Metro	-541.10	-534.70	-524.10	-511.20	-498.60	-488.20	-479.70	-473.10	-468.20	-464.80	-462.50
South West	-2.47	-2.30	-2.05	-1.75	-1.48	-1.23	-1.02	-0.89	-0.79	-0.72	-0.67
West Central	-1.29	-1.26	-1.16	-1.02	-0.88	-0.76	-0.64	-0.56	-0.49	-0.44	-0.41
<b>MISSOURI</b>	<b>-867.00</b>	<b>-862.80</b>	<b>-849.00</b>	<b>-829.80</b>	<b>-810.20</b>	<b>-792.70</b>	<b>-777.50</b>	<b>-765.70</b>	<b>-756.60</b>	<b>-749.70</b>	<b>-744.50</b>

Source: ES-202, Missouri Department of Economic Development; and REMI.

**Table 4**  
**Total Loss Scenario - Employment Change by Sector, 2000-2010**  
Difference from baseline projection.

SECTOR	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Agric, Forestry, Fishing	-163	-152	-136	-121	-108	-98	-90	-85	-83	-81	-81
Construction	-2,577	-2,302	-1,999	-1,695	-1,424	-1,199	-1,019	-897	-805	-737	-688
FIRE	-1,607	-1,510	-1,370	-1,244	-1,133	-1,042	-970	-914	-874	-844	-823
Government	-325	-700	-908	-1,067	-1,185	-1,266	-1,322	-1,361	-1,390	-1,411	-1,427
Manufacturing	-1,072	-743	-431	-164	46	199	301	352	376	381	371
Mining	-50	-45	-39	-34	-30	-26	-24	-22	-21	-19	-19
Retail Trade	-4,783	-4,471	-4,097	-3,732	-3,404	-3,131	-2,909	-2,788	-2,722	-2,684	-2,667
Wholesale Trade	-1,277	-1,162	-1,037	-914	-801	-703	-620	-574	-542	-521	-507
Services	-6,242	-5,673	-5,043	-4,492	-4,031	-3,674	-3,419	-3,276	-3,181	-3,139	-3,139
Transport, Comm, PU	-14,710	-14,590	-14,460	-14,340	-14,240	-14,150	-14,080	-14,040	-14,010	-13,990	-13,980
<b>TOTAL</b>	<b>-32,810</b>	<b>-31,340</b>	<b>-29,520</b>	<b>-27,800</b>	<b>-26,310</b>	<b>-25,090</b>	<b>-24,150</b>	<b>-23,600</b>	<b>-23,250</b>	<b>-23,050</b>	<b>-22,960</b>

Source: ES-202, Missouri Department of Economic Development; and REMI.

**Table 5**  
**Total Loss Scenario - Wage Change by Sector, 2000-2010**  
In millions of nominal dollars.  
Difference from baseline projection.

SECTOR	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Agric, Forestry, Fishing	-1.15	-1.13	-1.07	-1.00	-0.93	-0.86	-0.81	-0.77	-0.73	-0.71	-0.69
Construction	-44.00	-39.19	-34.61	-29.47	-24.63	-20.41	-16.79	-13.86	-11.43	-9.39	-7.71
FIRE	-25.46	-25.61	-24.80	-23.53	-22.14	-20.83	-19.66	-18.69	-17.96	-17.38	-16.93
Durable Manufacture	-14.96	-13.19	-10.27	-7.01	-3.94	-1.39	0.69	2.24	3.42	4.29	4.90
Non-Durable Manufacture	-10.59	-11.09	-10.34	-9.07	-7.66	-6.34	-5.17	-4.30	-3.60	-3.08	-2.68
Mining	-0.68	-0.61	-0.51	-0.42	-0.34	-0.27	-0.22	-0.18	-0.14	-0.12	-0.10
Retail Trade	-41.83	-41.99	-40.84	-38.88	-36.67	-34.59	-32.64	-31.22	-30.33	-29.64	-29.12
Wholesale Trade	-19.69	-19.76	-19.03	-17.73	-16.27	-14.89	-13.64	-12.70	-11.99	-11.47	-11.09
Services	-87.88	-89.13	-86.81	-82.95	-78.85	-75.38	-72.48	-70.12	-68.35	-67.20	-66.52
Transport, Comm, PU	-620.80	-621.20	-620.70	-619.80	-618.70	-617.70	-616.80	-616.10	-615.50	-615.00	-614.60
<b>TOTAL</b>	<b>-867.00</b>	<b>-862.80</b>	<b>-849.00</b>	<b>-829.80</b>	<b>-810.20</b>	<b>-792.70</b>	<b>-777.50</b>	<b>-765.70</b>	<b>-756.60</b>	<b>-749.70</b>	<b>-744.50</b>

Source: ES-202, Missouri Department of Economic Development; and REMI.

Missouri would experience a 0.9% decrease in Gross State Product in 2000, which recovers to a 0.5% decrease in GSP by 2010. The St. Louis Metro and Kansas City Gross Regional Products would decrease by 1.6% and 1.4%, respectively. However, GRP for both regions recovers somewhat by 2010. Refer to Table 6.

**Table 6**  
**Total Loss Scenario - Percent Change in Gross State/Regional Product, 2000-2010**  
 Difference from baseline projection.

	2000	2005	2010
Kansas City GRP	-1.41%	-1.13%	-1.00%
Kansas City Metro GRP	-0.53%	-0.29%	-0.23%
St. Louis GRP	-0.81%	-0.51%	-0.45%
St. Louis Metro GRP	-1.61%	-1.13%	-0.94%
<b>MISSOURI GSP</b>	<b>-0.92%</b>	<b>-0.65%</b>	<b>-0.55%</b>

Source: ES-202, Missouri Department of Economic Development; and REMI.

State tax revenues would also experience sharp decreases in 2000, yet would recover somewhat by 2010. General sales tax revenues would fall by \$34.5 million in 2000; individual income tax revenues would fall by \$29.4 million; and corporate income tax revenues would fall by \$4.3 million. Refer to Table 7.

**Table 7**  
**Total Loss Scenario - State Tax Revenue Change, 2000-2010**  
 Difference from baseline projection.

	2000	2005	2010
General Sales Tax	-34,520,000	-23,000,000	-19,400,000
Individual Income Tax	-29,440,000	-25,410,000	-24,300,000
Corporate Income Tax	-4,257,000	-3,047,000	-2,729,000

Source: ES-202, Missouri Department of Economic Development; and REMI.

Missouri would experience a sharp decline in population by 2010. In 2000, Missouri would lose 6,200 people, with over half coming from the St. Louis Metro region. By 2010, this decline expands to a loss of 27,020 people, again with over half coming from the St. Louis Metro region. Refer to Table 8.

**Table 8**  
**Total Loss Scenario - Population Change, 2000-2010**  
 Difference from baseline projection.

	2000	2005	2010
Kansas City	-628	-2,523	-3,062
Kansas City Metro	-1,049	-4,267	-4,846
St. Louis	-479	-1,769	-1,951
St. Louis Metro	-3,403	-13,060	-14,650
<b>MISSOURI</b>	<b>-6,200</b>	<b>-24,030</b>	<b>-27,020</b>

Source: ES-202, Missouri Department of Economic Development; and REMI.

## IV. Overhaul Base Loss Scenario

The following impact scenario assumes the closure of TWA's overhaul base facilities in Kansas City (MO), resulting in a loss of 2,661 jobs and \$132.4 million wages in the state. Impacts are ascertained by examining the difference between the baseline projection (no loss of jobs) and the scenario projection (loss of 2,661 jobs and \$132.4 million wages). The differential indicates the number of jobs above or below what would have been expected if no change in the economy had occurred. Job losses include both direct (jobs losses attributable to TWA closing) and indirect (job losses in ancillary sectors related to TWA operations) effects.

It appears that the loss of 2,661 TWA overhaul base jobs in Kansas City would result in a total loss of 6,862 jobs and \$171.5 million wages statewide in 2000. By 2010, the state economy regains some of these jobs, for a total loss of 5,282 jobs and \$167.1 million in wages. As expected, the Kansas City region would experience the largest negative impacts. In 2000, the Kansas City region would lose 4,957 jobs and \$143.9 million in wages. By 2010, there is some recovery of jobs in Kansas City, yet wages progressively fall - with 4,223 jobs and \$156.8 million in wages lost in 2010. This may indicate the increase of low-wage jobs in the Kansas City region.

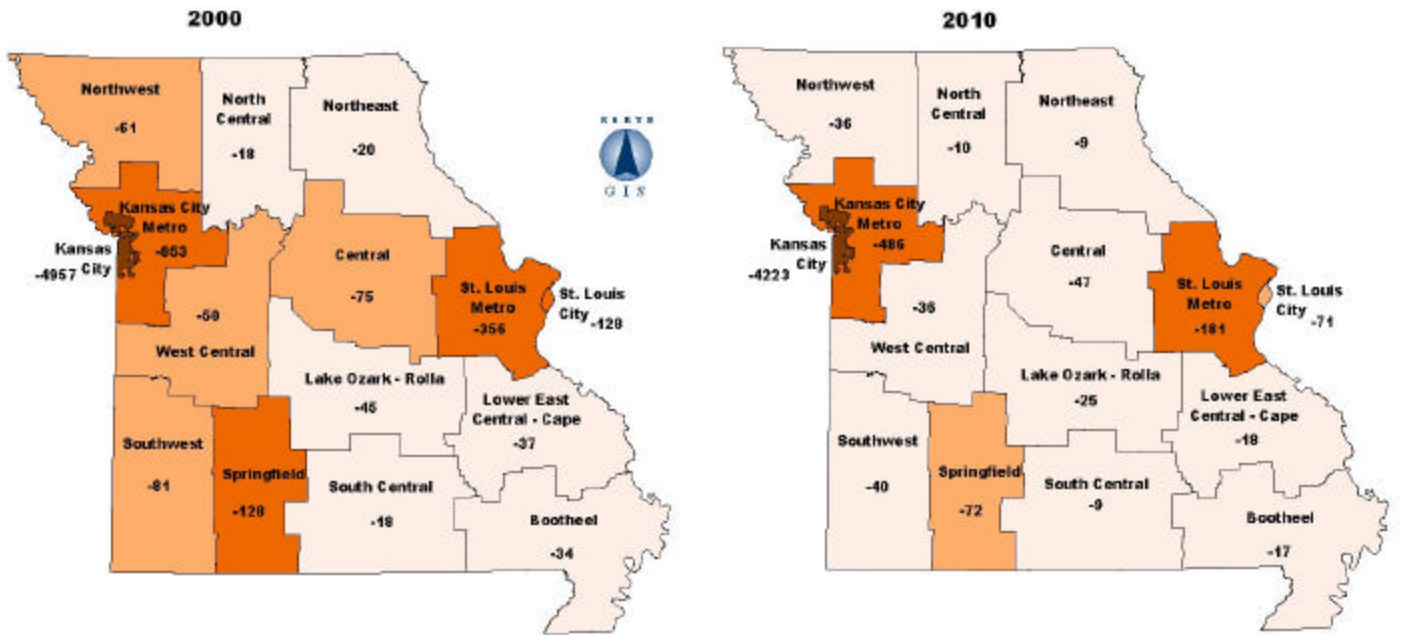
Also, the Kansas City Metro and St. Louis Metro regions also experience sizeable job losses in 2000, yet recover a good share of these jobs by 2010. In general, the state's economy would slowly recover from the direct and indirect job losses attributable to the closure of TWA's overhaul base in Kansas City. In particular, Kansas City's regional economy would be slow to recover from this loss of jobs. Refer to Tables 9 and 10, and Map 5.

As expected, the Transportation, Communications and Public Utilities sector would be most adversely affected by the loss of TWA's overhaul base in Kansas City - losing 3,173 jobs and \$135 million wages in 2000, with almost no recovery by 2010. The Services sector would lose 1,324 jobs and \$12.9 million in wages in 2000. By 2010, there is some recovery of Services jobs, yet wages progressively fall - with 810 jobs lost and \$15.9 million in wages lost by 2010. This may indicate the growth of low-wage service jobs in the state. Further, the Retail Trade sector would lose 932 jobs and \$6.4 million in wages in 2000, yet would recover slightly by 2010.

Interestingly, the Government sector experiences only a small loss of employment in 2000, losing 75 jobs. However, by 2010 the Government sector is expected to lose over 362 jobs - indicating that this sector does not recover over time. Also, wages in durable manufacturing increase over the baseline by 2010. Refer to Tables 11 and 12.



**Map 5**  
**Overhaul Base Loss Scenario - Employment by Region, 2000-2010**



**Table 9**  
**Overhaul Base Loss Scenario - Employment Change by Region, 2000-2010**  
Difference from baseline projection.

REGION	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Bootheel	-34	-32	-29	-26	-23	-21	-19	-18	-18	-17	-17
Central	-75	-72	-68	-62	-57	-53	-50	-48	-48	-47	-47
Kansas City	-4,957	-4,873	-4,745	-4,623	-4,512	-4,417	-4,341	-4,293	-4,260	-4,238	-4,223
Kansas City Metro	-853	-802	-732	-664	-604	-555	-517	-497	-487	-484	-486
LE Central/Cape	-37	-34	-31	-28	-25	-22	-20	-19	-19	-19	-18
Lake Ozark	-45	-43	-39	-36	-32	-30	-27	-26	-26	-25	-25
North Central	-18	-17	-16	-14	-13	-12	-11	-11	-10	-10	-10
North East	-20	-18	-16	-15	-13	-11	-10	-10	-10	-9	-9
North West	-61	-59	-55	-50	-45	-41	-38	-37	-36	-36	-36
South Central	-18	-17	-16	-14	-13	-11	-10	-10	-10	-9	-9
Springfield	-128	-120	-109	-99	-89	-82	-76	-73	-72	-71	-72
St. Louis	-128	-118	-106	-95	-85	-78	-73	-71	-70	-70	-71
St. Louis Metro	-356	-326	-290	-258	-230	-209	-194	-186	-182	-180	-181
South West	-81	-75	-68	-60	-54	-48	-44	-42	-41	-40	-40
West Central	-50	-50	-47	-44	-41	-38	-36	-35	-35	-35	-36
<b>MISSOURI</b>	<b>-6,862</b>	<b>-6,656</b>	<b>-6,366</b>	<b>-6,085</b>	<b>-5,836</b>	<b>-5,630</b>	<b>-5,468</b>	<b>-5,376</b>	<b>-5,323</b>	<b>-5,292</b>	<b>-5,282</b>

Source: ES-202, Missouri Department of Economic Development; and REMI.

**Table 10**  
**Overhaul Base Loss Scenario - Wage Change by Region, 2000-2010**  
In millions of nominal dollars.  
Difference from baseline projection.

REGION	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Bootheel	-0.28	-0.26	-0.24	-0.21	-0.17	-0.15	-0.12	-0.10	-0.08	-0.07	-0.06
Central	-0.79	-0.76	-0.71	-0.64	-0.57	-0.51	-0.45	-0.41	-0.38	-0.35	-0.33
Kansas City	-143.90	-146.70	-149.60	-151.90	-153.80	-155.10	-155.80	-156.40	-156.70	-156.90	-156.80
Kansas City Metro	-15.93	-16.02	-15.25	-14.07	-12.76	-11.45	-10.20	-9.12	-8.19	-7.42	-6.76
LE Central/Cape	-0.32	-0.30	-0.26	-0.22	-0.18	-0.15	-0.11	-0.09	-0.07	-0.06	-0.05
Lake Ozark	-0.34	-0.32	-0.29	-0.25	-0.21	-0.18	-0.15	-0.12	-0.10	-0.09	-0.08
North Central	-0.15	-0.14	-0.13	-0.11	-0.10	-0.08	-0.07	-0.06	-0.05	-0.04	-0.03
North East	-0.16	-0.15	-0.14	-0.12	-0.10	-0.08	-0.07	-0.05	-0.05	-0.04	-0.03
North West	-0.71	-0.70	-0.65	-0.58	-0.50	-0.42	-0.35	-0.30	-0.25	-0.22	-0.19
South Central	-0.12	-0.12	-0.10	-0.09	-0.07	-0.06	-0.05	-0.04	-0.03	-0.03	-0.02
Springfield	-1.17	-1.12	-1.02	-0.89	-0.76	-0.65	-0.54	-0.46	-0.40	-0.36	-0.33
St. Louis	-2.18	-2.11	-1.96	-1.78	-1.60	-1.43	-1.28	-1.18	-1.11	-1.06	-1.04
St. Louis Metro	-4.20	-3.96	-3.54	-3.06	-2.61	-2.16	-1.80	-1.51	-1.32	-1.16	-1.07
South West	-0.67	-0.62	-0.55	-0.47	-0.39	-0.32	-0.25	-0.20	-0.17	-0.14	-0.12
West Central	-0.56	-0.56	-0.53	-0.47	-0.41	-0.36	-0.30	-0.26	-0.22	-0.20	-0.17
<b>MISSOURI</b>	<b>-171.50</b>	<b>-173.80</b>	<b>-175.00</b>	<b>-174.90</b>	<b>-174.20</b>	<b>-173.10</b>	<b>-171.50</b>	<b>-170.30</b>	<b>-169.20</b>	<b>-168.10</b>	<b>-167.10</b>

Source: ES-202, Missouri Department of Economic Development; and REMI.

**Table 11**  
**Overhaul Base Loss Scenario - Employment Change by Sector, 2000-2010**  
Difference from baseline projection.

SECTOR	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Agric, Forestry, Fishing	-33	-32	-29	-26	-24	-23	-21	-21	-20	-20	-20
Construction	-486	-441	-388	-334	-285	-244	-210	-187	-170	-157	-148
FIRE	-319	-305	-282	-261	-243	-227	-215	-205	-198	-192	-188
Government	-75	-163	-213	-252	-283	-306	-324	-337	-347	-356	-362
Manufacturing	-257	-208	-160	-117	-81	-55	-35	-27	-22	-22	-23
Mining	-8	-7	-7	-6	-5	-5	-4	-4	-4	-3	-3
Retail Trade	-932	-883	-823	-763	-707	-661	-622	-602	-593	-588	-587
Wholesale Trade	-255	-236	-215	-194	-174	-156	-141	-133	-127	-124	-121
Services	-1,324	-1,234	-1,130	-1,038	-959	-898	-854	-830	-815	-808	-810
Transport, Comm, PU	-3,173	-3,147	-3,121	-3,096	-3,074	-3,056	-3,041	-3,032	-3,026	-3,022	-3,019
<b>TOTAL</b>	<b>-6,862</b>	<b>-6,656</b>	<b>-6,366</b>	<b>-6,085</b>	<b>-5,836</b>	<b>-5,630</b>	<b>-5,468</b>	<b>-5,376</b>	<b>-5,323</b>	<b>-5,292</b>	<b>-5,282</b>

Source: ES-202, Missouri Department of Economic Development; and REMI.

**Table 12**  
**Overhaul Base Loss Scenario - Wage Change by Sector, 2000-2010**  
In millions of nominal dollars.  
Difference from baseline projection.

SECTOR	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Agric, Forestry, Fishing	-0.17	-0.17	-0.17	-0.17	-0.17	-0.17	-0.16	-0.16	-0.16	-0.16	-0.16
Construction	-6.72	-6.04	-5.39	-4.60	-3.83	-3.10	-2.44	-1.89	-1.43	-1.02	-0.67
FIRE	-3.21	-3.35	-3.58	-3.79	-3.96	-4.08	-4.16	-4.21	-4.27	-4.30	-4.31
Durable Manufacture	-3.02	-2.93	-2.63	-2.21	-1.76	-1.32	-0.89	-0.55	-0.25	0.00	0.23
Non-Durable Manufacture	-1.54	-1.94	-2.17	-2.27	-2.29	-2.23	-2.12	-2.02	-1.92	-1.81	-1.70
Mining	-0.07	-0.06	-0.05	-0.04	-0.03	-0.02	-0.01	0.00	0.00	0.01	0.01
Retail Trade	-6.41	-6.65	-6.76	-6.74	-6.63	-6.46	-6.25	-6.10	-6.02	-5.94	-5.87
Wholesale Trade	-2.47	-2.61	-2.82	-2.96	-3.07	-3.12	-3.13	-3.14	-3.16	-3.17	-3.17
Services	-12.88	-14.83	-15.92	-16.53	-16.82	-16.86	-16.72	-16.56	-16.36	-16.14	-15.88
Transport, Comm, PU	-135.00	-135.20	-135.50	-135.60	-135.70	-135.70	-135.70	-135.70	-135.60	-135.60	-135.50
<b>TOTAL</b>	<b>-171.50</b>	<b>-173.80</b>	<b>-175.00</b>	<b>-174.90</b>	<b>-174.20</b>	<b>-173.10</b>	<b>-171.50</b>	<b>-170.30</b>	<b>-169.20</b>	<b>-168.10</b>	<b>-167.10</b>

Source: ES-202, Missouri Department of Economic Development; and REMI.

Missouri would experience a 0.2% decrease in Gross State Product in 2000, which recovers to a 0.1% decrease in GSP by 2010. The Kansas City and Kansas City Metro Gross Regional Products would decrease by 0.9% and 0.3%, respectively. However, GRP for both regions recovers somewhat by 2010. Refer to Table 13.

**Table 13**  
**Overhaul Base Loss Scenario - Percent Change in Gross State/Regional Product, 2000-2010**  
 Difference from baseline projection.

	2000	2005	2010
Kansas City GRP	-0.93%	-0.77%	-0.69%
Kansas City Metro GRP	-0.32%	-0.18%	-0.14%
St. Louis GRP	-0.04%	-0.02%	-0.02%
St. Louis Metro GRP	-0.03%	-0.02%	-0.02%
<b>MISSOURI GSP</b>	<b>-0.20%</b>	<b>-0.15%</b>	<b>-0.13%</b>

Source: ES-202, Missouri Department of Economic Development; and REMI.

State tax revenues would also experience sharp decreases in 2000, yet would recover somewhat by 2010. General sales tax revenues would fall by \$6.7 million in 2000; individual income tax revenues would fall by \$5.6 million; and corporate income tax revenues would fall by \$893,300. Refer to Table 14.

**Table 14**  
**Overhaul Base Loss Scenario - State Tax Revenue Change, 2000-2010**  
 Difference from baseline projection.

	2000	2005	2010
General Sales Tax	-6,746,000	-4,799,000	-4,174,000
Individual Income Tax	-5,622,000	-5,152,000	-5,056,000
Corporate Income Tax	-893,300	-702,400	-652,800

Source: ES-202, Missouri Department of Economic Development; and REMI.

Missouri would experience a sharp decline in population by 2010. In 2000, Missouri would lose 1,347 people, with over three-quarters coming from the Kansas City metropolitan area. By 2010, this decline expands to a loss of 6,394 people, again with over three-quarters coming from the Kansas City metropolitan area. Refer to Table 15.

**Table 15**  
**Overhaul Base Loss Scenario - Population Change, 2000-2010**  
 Difference from baseline projection.

	2000	2005	2010
Kansas City	-399	-1,618	-2,006
Kansas City Metro	-693	-2,878	-3,315
St. Louis	-13	-51	-57
St. Louis Metro	-79	-299	-320
<b>MISSOURI</b>	<b>-1,347</b>	<b>-5,490</b>	<b>-6,394</b>

Source: ES-202, Missouri Department of Economic Development; and REMI.

## V. Administrative and Corporate Loss Scenario

The following impact scenario assumes the closure of TWA's administrative and corporate facilities in Kansas City (loss of 985 jobs and \$41 million wages) and St. Louis (loss of 962 jobs and \$36 million wages), which would result in the loss of 1,947 jobs and \$77.1 million wages in the state. Impacts are ascertained by examining the difference between the baseline projection (no loss of jobs) and the scenario projection (loss of 1,947 jobs and \$77.1 million wages). The differential indicates the number of jobs above or below what would have been expected if no change in the economy had occurred. Job losses include both direct (jobs losses attributable to TWA closing) and indirect (job losses in ancillary sectors related to TWA operations) effects.

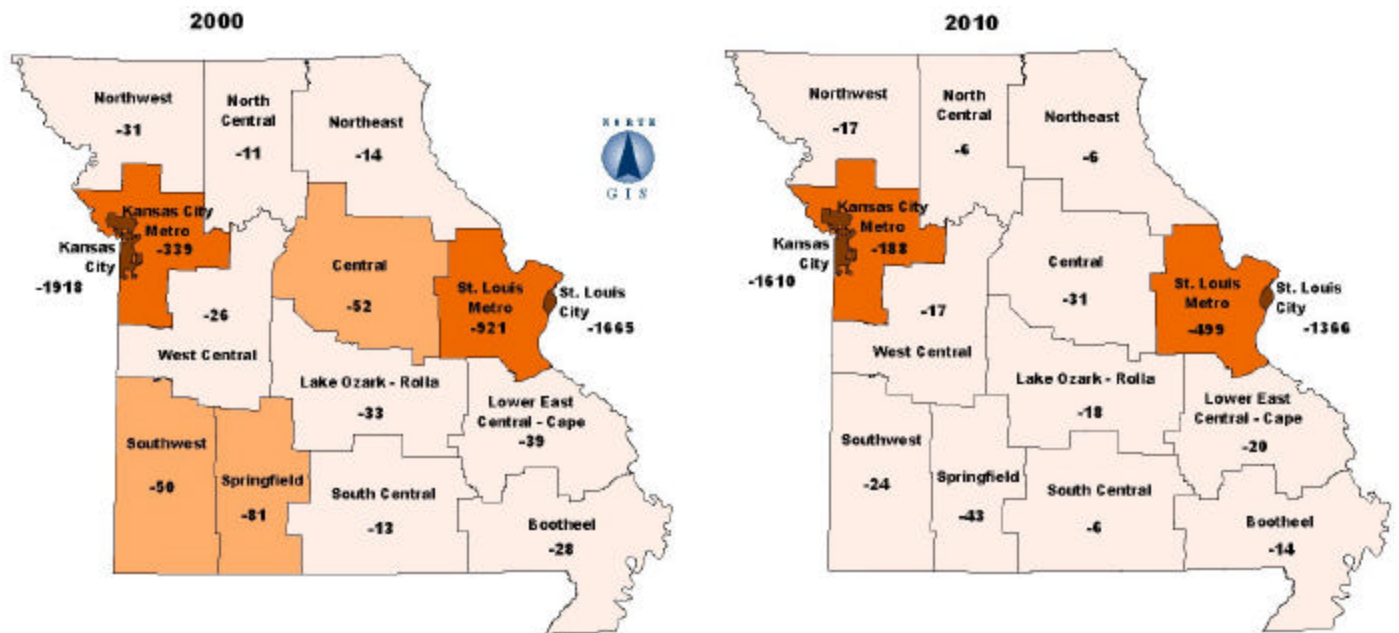
It appears that the loss of all 1,947 TWA administrative jobs in Kansas City and St. Louis would result in the loss of 5,223 jobs and \$104.5 million in wages statewide in 2000. By 2010, the state economy regains some of these jobs, for a total loss of 3,865 jobs and \$96.7 million in wages. As expected, the Kansas City and St. Louis regions would experience the largest negative impacts. In 2000, the Kansas City region would lose 1,918 jobs and \$45.2 million in wages. By 2010, there is some recovery of jobs, but wages progressively fall - with 1,610 jobs and \$48.7 million in wages lost in 2010. In 2000, the St. Louis region would lose 1,665 jobs and \$37.7 million in wages. Again, there is some recovery of jobs, but wages progressively fall - with 1,366 jobs and \$41.5 million in wages lost in 2010. For both regions, this may indicate the increase of low-wage jobs. Displaced workers may find employment in other sectors, but their wages will be lower.

Also, the St. Louis Metro region experiences sizeable job losses in 2000, yet recovers a good share of these jobs by 2010. In general, the state's economy would recover moderately from the direct and indirect job losses attributable to the closure of TWA's administrative and corporate offices. Refer to Tables 16 and 17, and Map 6.

As expected, the Transportation, Communications and Public Utilities sector would be most adversely affected by the loss of TWA's administrative and corporate offices - losing 2,318 jobs and \$78.7 million wages in 2000 with almost no recovery in 2010. The Services sector would lose 1,025 jobs and \$8.9 million in wages in 2000. By 2010, there is moderate recovery of Services jobs, yet wages progressively fall - with 594 jobs and \$9.8 million in wages lost by 2010. This may indicate the growth of low-wage service jobs in the state. Further, the Retail Trade sector would lose 753 jobs and \$4.4 million in wages in 2000, yet would recover moderately by 2010.

Interestingly, the Manufacturing sector experiences a loss of 185 jobs and \$3.1 million wages in 2000. Yet, by 2005 the manufacturing sector recovers all of these previously lost jobs; and by 2010 there is an additional 24 manufacturing jobs in the state's economy. Also, wages in durable manufacturing recover by 2007, and by 2010 there is an additional \$860,000 in wages. Further, the Government sector experiences a small loss of employment in 2000, losing 57 jobs. However, by 2010 this expands to a loss of 271 jobs - indicating that this sector does not recover over time. Refer to Tables 18 and 19.

**Map 6**  
**Administrative and Corporate Loss Scenario - Employment by Region, 2000-2010**





**Table 16**  
**Administrative and Corporate Loss Scenario - Employment Change by Region, 2000-2010**  
Difference from baseline projection.

REGION	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Bootheel	-28	-26	-23	-21	-18	-17	-15	-14	-14	-14	-14
Central	-52	-50	-47	-43	-39	-36	-33	-32	-32	-31	-31
Kansas City	-1,918	-1,881	-1,827	-1,774	-1,727	-1,688	-1,656	-1,637	-1,624	-1,616	-1,610
Kansas City Metro	-339	-317	-289	-261	-236	-216	-201	-192	-189	-187	-188
LE Central/Cape	-39	-36	-33	-29	-26	-23	-22	-21	-20	-20	-20
Lake Ozark	-33	-31	-28	-26	-23	-21	-19	-19	-18	-18	-18
North Central	-11	-11	-10	-9	-8	-7	-7	-6	-6	-6	-6
North East	-14	-13	-12	-10	-9	-8	-7	-7	-7	-6	-6
North West	-31	-29	-27	-24	-22	-20	-18	-18	-17	-17	-17
South Central	-13	-12	-11	-10	-9	-8	-7	-7	-7	-7	-6
Springfield	-81	-75	-68	-61	-55	-50	-46	-44	-43	-43	-43
St. Louis	-1,665	-1,622	-1,571	-1,524	-1,482	-1,447	-1,418	-1,398	-1,384	-1,373	-1,366
St. Louis Metro	-921	-848	-755	-670	-599	-545	-509	-492	-487	-490	-499
South West	-50	-46	-41	-36	-32	-29	-26	-25	-24	-24	-24
West Central	-26	-25	-23	-22	-20	-18	-17	-17	-17	-17	-17
<b>MISSOURI</b>	<b>-5,223</b>	<b>-5,025</b>	<b>-4,764</b>	<b>-4,518</b>	<b>-4,305</b>	<b>-4,133</b>	<b>-4,002</b>	<b>-3,929</b>	<b>-3,888</b>	<b>-3,868</b>	<b>-3,865</b>

Source: ES-202, Missouri Department of Economic Development; and REMI.

**Table 17**  
**Administrative and Corporate Loss Scenario - Wage Change by Region, 2000-2010**  
In millions of nominal dollars.  
Difference from baseline projection.

REGION	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Bootheel	-0.18	-0.17	-0.15	-0.12	-0.10	-0.08	-0.06	-0.05	-0.04	-0.03	-0.02
Central	-0.43	-0.41	-0.37	-0.33	-0.28	-0.24	-0.20	-0.18	-0.16	-0.14	-0.12
Kansas City	-45.28	-46.11	-46.95	-47.61	-48.11	-48.47	-48.61	-48.72	-48.77	-48.75	-48.72
Kansas City Metro	-5.11	-5.12	-4.86	-4.47	-4.03	-3.61	-3.20	-2.85	-2.55	-2.29	-2.09
LE Central/Cape	-0.30	-0.29	-0.25	-0.21	-0.17	-0.14	-0.10	-0.08	-0.06	-0.05	-0.03
Lake Ozark	-0.20	-0.19	-0.17	-0.14	-0.12	-0.09	-0.07	-0.06	-0.05	-0.04	-0.03
North Central	-0.07	-0.06	-0.06	-0.05	-0.04	-0.03	-0.03	-0.02	-0.02	-0.01	-0.01
North East	-0.09	-0.08	-0.07	-0.06	-0.05	-0.04	-0.03	-0.02	-0.02	-0.01	-0.01
North West	-0.27	-0.26	-0.24	-0.21	-0.18	-0.15	-0.12	-0.10	-0.08	-0.07	-0.06
South Central	-0.07	-0.06	-0.05	-0.05	-0.04	-0.03	-0.02	-0.02	-0.01	-0.01	-0.01
Springfield	-0.57	-0.54	-0.48	-0.41	-0.34	-0.28	-0.23	-0.19	-0.16	-0.13	-0.12
St. Louis	-37.71	-38.48	-39.39	-40.15	-40.78	-41.24	-41.55	-41.73	-41.77	-41.71	-41.52
St. Louis Metro	-13.67	-13.46	-12.37	-10.97	-9.50	-8.11	-6.90	-5.86	-5.05	-4.38	-3.90
South West	-0.32	-0.29	-0.26	-0.21	-0.17	-0.13	-0.10	-0.08	-0.06	-0.04	-0.03
West Central	-0.21	-0.21	-0.19	-0.17	-0.15	-0.12	-0.10	-0.09	-0.07	-0.06	-0.05
<b>MISSOURI</b>	<b>-104.50</b>	<b>-105.70</b>	<b>-105.90</b>	<b>-105.10</b>	<b>-104.10</b>	<b>-102.80</b>	<b>-101.30</b>	<b>-100.00</b>	<b>-98.86</b>	<b>-97.72</b>	<b>-96.72</b>

Source: ES-202, Missouri Department of Economic Development; and REMI.

**Table 18**  
**Administrative and Corporate Loss Scenario - Employment Change by Sector, 2000-2010**  
Difference from baseline projection.

SECTOR	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Agric, Forestry, Fishing	-27	-25	-23	-21	-19	-18	-17	-16	-16	-16	-16
Construction	-395	-355	-311	-265	-225	-192	-165	-147	-134	-124	-117
FIRE	-257	-243	-223	-204	-188	-175	-164	-156	-150	-146	-144
Government	-57	-124	-162	-192	-215	-231	-244	-253	-261	-267	-271
Manufacturing	-185	-137	-90	-51	-20	3	17	25	27	27	24
Mining	-7	-7	-6	-5	-5	-4	-4	-3	-3	-3	-3
Retail Trade	-753	-709	-656	-603	-556	-517	-485	-469	-461	-458	-457
Wholesale Trade	-200	-183	-164	-145	-128	-113	-101	-94	-90	-87	-86
Services	-1,025	-945	-853	-774	-708	-657	-622	-604	-593	-591	-594
Transport, Comm, PU	-2,318	-2,298	-2,278	-2,259	-2,242	-2,229	-2,218	-2,211	-2,207	-2,204	-2,202
<b>TOTAL</b>	<b>-5,223</b>	<b>-5,025</b>	<b>-4,764</b>	<b>-4,518</b>	<b>-4,305</b>	<b>-4,133</b>	<b>-4,002</b>	<b>-3,929</b>	<b>-3,888</b>	<b>-3,868</b>	<b>-3,865</b>

Source: ES-202, Missouri Department of Economic Development; and REMI.

**Table 19**  
**Administrative and Corporate Loss Scenario - Wage Change by Sector, 2000-2010**  
In millions of nominal dollars.  
Difference from baseline projection.

SECTOR	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Agric, Forestry, Fishing	-0.13	-0.13	-0.12	-0.11	-0.10	-0.10	-0.09	-0.08	-0.08	-0.07	-0.07
Construction	-4.87	-4.29	-3.74	-3.13	-2.55	-2.01	-1.53	-1.14	-0.81	-0.52	-0.29
FIRE	-2.36	-2.43	-2.50	-2.53	-2.54	-2.52	-2.48	-2.43	-2.39	-2.35	-2.31
Durable Manufacture	-2.14	-2.00	-1.67	-1.27	-0.87	-0.48	-0.12	0.18	0.44	0.67	0.86
Non-Durable Manufacture	-0.91	-1.08	-1.16	-1.16	-1.12	-1.04	-0.94	-0.83	-0.70	-0.58	-0.45
Mining	-0.06	-0.06	-0.05	-0.04	-0.04	-0.03	-0.02	-0.02	-0.01	-0.01	0.00
Retail Trade	-4.38	-4.56	-4.59	-4.52	-4.40	-4.24	-4.06	-3.92	-3.83	-3.74	-3.67
Wholesale Trade	-1.99	-2.13	-2.21	-2.23	-2.20	-2.14	-2.06	-1.99	-1.93	-1.87	-1.82
Services	-8.99	-10.18	-10.74	-10.97	-11.01	-10.94	-10.76	-10.53	-10.29	-10.03	-9.81
Transport, Comm, PU	-78.67	-78.89	-79.07	-79.18	-79.25	-79.28	-79.27	-79.27	-79.24	-79.21	-79.17
<b>TOTAL</b>	<b>-104.50</b>	<b>-105.70</b>	<b>-105.90</b>	<b>-105.10</b>	<b>-104.10</b>	<b>-102.80</b>	<b>-101.30</b>	<b>-100.00</b>	<b>-98.86</b>	<b>-97.72</b>	<b>-96.72</b>

Source: ES-202, Missouri Department of Economic Development; and REMI.

Missouri would experience a 0.2% decrease in Gross State Product in 2000, which recovers to a 0.1% decrease in GSP by 2010. The Kansas City and St. Louis Gross Regional Products would decrease by 0.4% and 0.5%, respectively. However, GRP for both regions recover somewhat by 2010. Refer to Table 20.

**Table 20**  
**Administrative and Corporate Loss Scenario - Percent Change in Gross State/Regional Product, 2000-2010**

Difference from baseline projection.

	2000	2005	2010
Kansas City GRP	-0.36%	-0.30%	-0.26%
Kansas City Metro GRP	-0.13%	-0.07%	-0.06%
St. Louis GRP	-0.47%	-0.38%	-0.34%
St. Louis Metro GRP	-0.08%	-0.04%	-0.03%
<b>MISSOURI GSP</b>	<b>-0.15%</b>	<b>-0.11%</b>	<b>-0.10%</b>

Source: ES-202, Missouri Department of Economic Development; and REMI.

State tax revenues would also experience sharp decreases in 2000, yet would recover somewhat by 2010. General sales tax revenues would fall by \$5.2 million in 2000; individual income tax revenues would fall by \$4.8 million; and corporate income tax revenues would fall by \$702,200. Refer to Table 21.

**Table 21**  
**Administrative and Corporate Loss Scenario - State Tax Revenue Change, 2000-2010**

Difference from baseline projection.

	2000	2005	2010
General Sales Tax	-5,232,000	-3,602,000	-3,149,000
Individual Income Tax	-4,758,000	-4,347,000	-4,280,000
Corporate Income Tax	-702,200	-526,300	-484,900

Source: ES-202, Missouri Department of Economic Development; and REMI.

Missouri would experience sharp a decline in population by 2010. In 2000, Missouri would lose 1,055 people. By 2010, this decline expands to a loss of 4,947. Refer to Table 22.

**Table 22**  
**Administrative and Corporate Loss Scenario - Population Change, 2000-2010**

Difference from baseline projection.

	2000	2005	2010
Kansas City	-157	-637	-785
Kansas City Metro	-266	-1,101	-1,264
St. Louis	-94	-373	-495
St. Louis Metro	-430	-1,755	-1,963
<b>MISSOURI</b>	<b>-1,055</b>	<b>-4,279</b>	<b>-4,947</b>

Source: ES-202, Missouri Department of Economic Development; and REMI.

## VI. Summary and Implications

The **total loss impact scenario** assumes the closure of all TWA facilities in Missouri, resulting in the loss of all TWA jobs in the state - a loss of 12,430 jobs and \$604.4 million wages. It appears that the loss of all 12,430 TWA jobs in Missouri would result in a total loss of 32,810 jobs and \$876 million wages in 2000. By 2010, the state economy regains 10,000 jobs, for a total loss of 22,960 jobs and \$744.5 million in wages. As expected, the St. Louis and Kansas City metro regions would experience the largest negative impacts.

As expected, the Transportation, Communications and Public Utilities sector would be most adversely affected by the loss of all TWA employment in Missouri - losing 14,710 jobs and \$620.8 million wages in 2000, with only small recovery in 2010. Interestingly, the Manufacturing sector experiences a loss of 1,072 jobs in 2000. However, by 2004 the manufacturing sector recovers all of these previously lost jobs; and by 2010 there is an additional 371 manufacturing jobs in the state's economy. Also, wages in durable manufacturing recover by 2006; and by 2010 there is an additional \$4.9 million in wages. Further, the Government sector experiences a small loss of employment in 2000, losing 325 jobs. However, by 2010 this expands to a loss of 1,427 jobs.

The **overhaul base loss impact scenario** assumes the closure of TWA's overhaul base facilities in Kansas City (MO), resulting in a loss of 2,661 jobs and \$132.4 million wages in the state. It appears that the loss of 2,661 TWA overhaul base jobs in Kansas City would result in a total loss of 6,862 jobs and \$171.5 million wages statewide in 2000. By 2010, the state economy regains some of these jobs, for a total loss of 5,282 jobs and \$167.1 million in wages. As expected, the Kansas City region would experience the largest negative impacts.

As expected, the Transportation, Communications and Public Utilities sector would be most adversely affected by the loss of TWA's overhaul base in Kansas City - losing 3,173 jobs and \$135 million wages in 2000, with almost no recovery by 2010. Interestingly, the Government sector experiences only a small loss of employment in 2000, losing 75 jobs. However, by 2010 the Government sector is expected to lose over 362 jobs - indicating that this sector does not recover over time. Also, wages in durable manufacturing increase over the baseline by 2010.

The **administrative and corporate loss impact scenario** assumes the closure of TWA's administrative and corporate facilities in Kansas City (loss of 985 jobs and \$41 million wages) and St. Louis (loss of 962 jobs and \$36 million wages), which would result in the loss of 1,947 jobs and \$77.1 million wages in the state. It appears that the loss of all 1,947 TWA administrative jobs in Kansas City and St. Louis would result in the loss of 5,223 jobs and \$104.5 million in wages statewide in 2000. By 2010, the state economy regains some of these jobs, for a total loss of 3,865 jobs and \$96.7 million in wages. As expected, the Kansas City and St. Louis regions would experience the largest negative impacts.

As expected, the Transportation, Communications and Public Utilities sector would be most adversely affected by the loss of TWA's administrative and corporate offices - losing 2,318 jobs and \$78.7 million wages in 2000 with almost no recovery in 2010. Interestingly, the Manufacturing sector experiences a loss of 185 jobs and \$3.1 million wages in 2000. Yet, by 2005 the manufacturing sector recovers all of these previously lost jobs; and by 2010 there is an additional 24 manufacturing jobs in the state's economy. Also, wages in durable manufacturing recover by 2007, and by 2010 there is an additional \$860,000 in wages. Further, the Government sector experiences a small loss of employment in 2000, losing 57 jobs. However, by 2010 this expands to a loss of 271 jobs.

In summary, the closure of all TWA facilities in Missouri would have deleterious impacts on the Missouri economy. The state economy would recover, albeit slowly. Although this scenario is unlikely to happen, it is possible that the merger would result in the closure of maintenance bases and corporate offices in Missouri. From this analysis, it appears that the closure of the overhaul/maintenance base in Kansas City would have the greatest negative impact on the state's economy - more than the closure of TWA's administrative and corporate offices in Kansas City and St. Louis.

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Analysis and reporting by David J. Peters, Planner.  
Assisted by Jeff Drake, Zachary Johnson, and Kerri Tesreau.

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*Direct all correspondence to David J. Peters:*

620 Harry S. Truman Building  
Department of Economic Development  
Jefferson City, MO 65102

TEL: (573) 522-2791

FAX: (573) 751-7385

E-MAIL: [dpeters4@mail.state.mo.us](mailto:dpeters4@mail.state.mo.us)

WEB: <http://www.ded.state.mo.us/research>